

REMARKS/ARGUMENTS

Claims 1-21 and 24-35 are active in this application. Applicants thank the Examiner for indicating, in the Office Action, that the subject matter of Claim 4 is allowable. In view of the following remarks and the distinctions made during the above-noted discussion, Applicants request reconsideration and allowance of all pending claims.

Applicants also thank Examiner Akkapeddi for the courteous discussion granted to the Applicants' undersigned representative on March 3, 2004. During the discussion, the Examiner requested a copy of all pending claims along with a mark-up of any amendments submitted previously. This is attached as Exhibit 1.

During the above-noted discussion, the undersigned pointed out why the claimed chloestic layered material is NOT described in Takizawa (U.S. Patent No. 5,631,665). Further details of that discussion follows.

Claim 1 claims a cholesteric layered material comprising at least one three-dimensionally cross-linked, aligned, cholesteric layer, wherein the cross-linked cholesteric layers do not exhibit any color shift which can be induced by external stimuli.

In contrast, Takizawa et al. describe a liquid crystal device produced by a polymerization-induced phase separation (PIPS) technique (column 6, lines 44-52) which results in an uncrosslinked liquid crystal (cholesteric) material domain trapped within a cross-linked (or polymerized) matrix. Thus, it is clear that the liquid crystal device described in Takizawa et al. is not the same as the cholesteric layered material which has a three-dimensionally cross-linked aligned cholesteric layer (see, e.g., Claim 1).

During the discussion with the undersigned, the Examiner requested additional evidence that the Takizawa et al. layer is not crosslinked. Accordingly, Applicants attach hereto a discussion of polymerization-induced phase separation (PIPS) from "Liquid Crystal

Dispersions,” Paul S. Drzaic (World Scientific) and direct the Examiner’s attention to page 33 of the attached publication.

Furthermore, Takizawa et al. describes that the liquid crystal device (column 10, lines 34-48) whereby the “acrylic polymer material... is cross-linked...” (column 10, lines 44-48, noting that the acrylic polymer material is the matrix polymer). Further evidence that the liquid crystals are not crosslinked is found in Takizawa itself. As described in column 7, lines 31-44, the device switches from a transparent to an opaque state upon application of a voltage. If the liquid crystals are crosslinked, the device cannot switch from a transparent to an opaque state as described by Takizawa et al. since the chemical fixation will prevent the liquid crystals from rotating.

Since it is clear that the liquid crystal (cholesteric) material is not crosslinked as required in the present claims, Takizawa et al. cannot anticipate Claims 1-2 and 5. Accordingly, withdrawal of the rejection under 35 U.S.C. § 102(b) over Takizawa et al. is requested.

Turning to the rejection of Claims 3, 6, 7, 24 and 25 under 35 U.S.C. § 103(a) over Takizawa et al. in view of Leigeber et al. (U.S. Patent No. 6,071,438), this rejection is also untenable for the following reasons.

The discussion of the differences between Takizawa et al. and the present invention is provided above. Leigeber et al. is cited to provide disclosure for various embodiments in the dependent claims. However, Leigeber et al. does not remedy the central deficiency of Takizawa et al., that is to provide a cross-linked cholesteric layer as required in the present claims. Accordingly, Claims 3, 6, 7, 24 and 25 would not have been obvious in view of the combination of these two references and as such withdrawal of this ground of rejection is requested.

The rejection of Claims 8 and 21 under 35 U.S.C. § 103(a) over Takizawa et al. in view of Muller-Rees et al. (U.S. Patent No. 5,851,604) is also untenable for the following reasons.

As noted above, Takizawa et al. does not describe a cross-linked aligned cholesteric layer as required in Claim 8. Since Muller-Rees et al. is cited to provide interfering pigments and additional characteristics of those pigments, Claims 8 and 21 cannot be obvious in view of the combination of Takizawa et al. and Muller-Rees et al. Accordingly, withdrawal of this ground of rejection is requested.

Finally, Applicants request an indication that all pending claims are allowable. Early notice of such is also requested.

Respectfully submitted,

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